

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-2. (Cancelled)

3. (Currently Amended) The method of claim [[2]] 5 further comprising wherein processing the signals to detect the landmine comprises removing, from the detected signals, signal components related to frequency clutter that is not associated with a buried landmine.

4. (Currently Amended) The method of claim [[2]] 5 further comprising wherein processing the signals to detect the landmine comprises processing detected signals from all frequencies to reduce speckle effects.

5. (Currently Amended) A method comprising:  
using a frequency-stepped radar to sequentially induce vibrations of different frequencies in a landmine;

detecting electromagnetic signals associated with the vibrations; and

The method of claim 2 wherein processing the detected electromagnetic signals to detect the landmine, comprises the processing including measuring a peak of a processed signal to determine vibration displacement.

6. (Previously Presented) The method of claim 5 further comprising converting the determined vibration displacement to an audible signal.

7. (Currently Amended) The method of claim 5 further comprising wherein processing the signals to detect the landmine comprises identifying whether the determined vibration displacement is consistent with a landmine.

8. (Previously Presented) The method of claim 7 wherein identifying whether the determined vibration displacement is consistent with a landmine comprises:

comparing the determined vibration displacement with a previously determined vibration displacement; and

identifying that the determined vibration displacement is consistent with a landmine in response to a result of the comparison that exceeds a threshold difference.

9. (Currently Amended) The method of claim [[2]] 5 further comprising presenting an audible signal when a landmine is detected.

10. (Currently Amended) The system of claim [[1]] 13 further comprising a metal detection sensor configured to detect metal.

11. (Currently Amended) The system of claim [[1]] 13 wherein the processor is further configured to remove, from the detected signals, signal components related to frequency clutter that is not associated with a buried landmine.

12. (Currently Amended) The system of claim [[1]] 13 wherein the processor is further configured to process detected signals from all frequencies to reduce speckle effects.

13. (Currently Amended) A system comprising:  
a frequency-stepped radar configured to induce vibrations in a landmine using different frequencies;

a sensor configured to detect electromagnetic signals associated with the vibrations; and

a processor configured to process the detected electromagnetic signals to detect the landmine, the processor being ~~The system of claim 1 wherein the processor is further configured to measure a peak of a processed signal to determine vibration displacement.~~

14. (Previously Presented) The system of claim 13 the processor is further configured to convert the determined vibration displacement to an audible signal.

15. (Previously Presented) The system of claim 13 the processor is further configured to identify whether the determined vibration displacement is consistent with a landmine.

16. (Previously Presented) The system of claim 15 wherein the processor is further configured to:

compare the determined vibration displacement with a previously determined vibration displacement; and

identify that the determined vibration displacement is consistent with a landmine in response to a result of the comparison that exceeds a threshold difference.

17. (Currently Amended) The system of claim [[1]] 13 the processor is further configured to present an audible signal when a landmine is detected.